



DEPARTMENT OF HOMELAND SECURITY

Coast Guard

[Docket No. USCG-2016-0445]

Limited Purpose Cooperative Research and Development Agreement – UAS Research with the University of Massachusetts Amherst

AGENCY: Coast Guard, DHS.

ACTION: Notice of intent; request for comments.

SUMMARY: The Coast Guard announces its intent to enter into a cooperative research and development agreement (CRADA) with several companies to evaluate small unmanned aircraft systems (SUAS) and their airborne sensors, to determine their potential for use in a maritime environment by a first responder and DHS operational components. The Coast Guard will conduct flight testing and evaluation of SUAS under a wide variety of simulated but realistic and relevant real-world maritime operational scenarios, such as law enforcement, search and rescue, and maritime environmental response. While the Coast Guard is currently considering partnering with the University of Massachusetts Amherst, it solicits public comment on the possible participation of other parties in the proposed CRADA, and the nature of that participation. The Coast Guard also invites other potential non-Federal participants, who have the interest and capability to bring similar contributions to this type of research, to consider submitting proposals for consideration in similar CRADAs.

DATES: Comments must be submitted to the online docket via <http://www.regulations.gov>, or

reach the Docket Management Facility, on or before **30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER.**

Synopses of proposals regarding future CRADAs must reach the Coast Guard (see **FOR FURTHER INFORMATION CONTACT**) on or before **30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER.**

ADDRESSES: Submit comments using one of the listed methods, and see **SUPPLEMENTARY INFORMATION** for more information on public comments.

- *Online* – <http://www.regulations.gov> following website instructions.
- *Fax* – 202-493-2251.
- *Mail or hand deliver* – Docket Management Facility (M-30), U.S. Department of Transportation, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590-0001. Hours for hand delivery are 9 a.m. to 5 p.m., Monday through Friday, except Federal holidays (telephone 202-366-9329).

FOR FURTHER INFORMATION CONTACT: If you have questions on this notice or wish to submit proposals for future CRADAs, contact Dr. Andrew Niccolai, Project Official, Aviation Branch, U.S. Coast Guard Research and Development Center, 1 Chelsea Street, New London, CT 06320, telephone 860-271-2670, e-mail Andrew.M.Niccolai@uscg.mil. If you have questions on viewing or submitting material to the docket, call Cheryl Collins, Program Manager, Docket Operations, telephone 202-366-9826, toll free 1-800-647-5527.

SUPPLEMENTARY INFORMATION:

Public Participation and Request for Comments

We encourage you to submit comments and related material on this notice. All comments received will be posted, without change, to <http://www.regulations.gov> and will include any personal information you have provided.

Do not submit detailed proposals for future CRADAs to the Docket Management Facility. Instead, submit them directly to the Coast Guard (see **FOR FURTHER INFORMATION CONTACT**).

Comments should be marked with docket number USCG-2016-0445 and should provide a reason for each suggestion or recommendation. You should provide personal contact information so that we can contact you if we have questions regarding your comments; but please note that all comments will be posted to the online docket without change and that any personal information you include can be searchable online (see the Federal Register Privacy Act notice regarding our public dockets, 73 FR 3316, Jan. 17, 2008).

Mailed or hand-delivered comments should be in an unbound 8½ x 11 inch format suitable for reproduction. The Docket Management Facility will acknowledge receipt of mailed comments if you enclose a stamped, self-addressed postcard or envelope with your submission.

Documents mentioned in this notice, and all public comments, are in our online docket at <http://www.regulations.gov> and can be viewed by following the website's instructions. You can also view the docket at the Docket Management Facility (see the mailing address under **ADDRESSES**) between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Discussion

CRADAs are authorized under 15 U.S.C. 3710(a).¹ A CRADA promotes the transfer of technology to the private sector for commercial use, as well as specified research or development

¹ The statute confers this authority on the head of each Federal agency. The Secretary of DHS's authority is delegated to the Coast Guard and other DHS organizational elements by DHS Delegation No. 0160.1, para. II.B.34.

efforts that are consistent with the mission of the Federal parties to the CRADA. The Federal party or parties agree with one or more non-Federal parties to share research resources, but the Federal party does not contribute funding.

CRADAs are not procurement contracts. Care is taken to ensure that CRADAs are not used to circumvent the contracting process. CRADAs have a specific purpose and should not be confused with other types of agreements such as procurement contracts, grants, and cooperative agreements.

Under the proposed CRADA, the Coast Guard's Research and Development Center (R&DC) will collaborate with one or more non-Federal participants. Together, the R&DC and the non-Federal participants will evaluate SUAS and their airborne sensors to determine their potential for use in a maritime environment by a first responder and DHS operational components.

We anticipate that the Coast Guard's contributions under the proposed CRADA will include the following:

(1) The R&D Center will define the objectives of the evaluation to be conducted during this CRADA in a series of Assessment Plans that will guide the execution of simulated but realistic and relevant real-world maritime operational scenarios that will determine the sUAS' ability to contribute to USCGC's mission effectiveness in the areas of: A) Counter GPS Jamming/Spoofing for sUAS; B) Sense & Avoid Systems for UAS; C) UAS Traffic Monitoring Systems; and D) NUSTAR standards for airworthiness certifications;

(2) Provide the SUAS test range, test range support, facilities, and all approvals required for a 5 day demonstration under the CRADA;

(3) Conduct the privacy threshold analysis required for the demonstration;

- (4) Conduct the privacy impact assessment required for the demonstration;
- (5) Coordinate any required spectrum approval for the SUAS;
- (6) Coordinate and receive any required interim flight clearance for the demonstration;
- (7) Provide any required airspace coordination and de-confliction for the demonstration test plan;

- (8) Collect and analyze demonstration test plan data; and
- (9) Develop a demonstration final report documenting the methodologies, findings, conclusions, and recommendations of this CRADA work.

We anticipate that the non-Federal participants' contributions under the proposed CRADA will include the following:

- (1) Provide the faculty, students, and professional researchers with the required competencies, skill sets, and laboratory facilities to collaborate on these topic areas;
- (2) Provide technically mature, flight proven sUAS, their fully-integrated sensors, and sUAS operators. Those operators shall operate the sUAS;
- (3) Supply access to wind tunnels, engineering/manufacturing laboratories, and modeling and simulation software to meet evaluation objectives in determining sUAS mission effectiveness; and
- (4) Provide personnel to collect data, analyze the data, and then compile the results in a series of collaborative reports.

The Coast Guard reserves the right to select for CRADA participants all, some, or no proposals submitted for this CRADA. The Coast Guard will provide no funding for reimbursement of proposal development costs. Proposals and any other material submitted in response to this notice will not be returned. Proposals submitted are expected to be unclassified

and have no more than five single-sided pages (excluding cover page, DD 1494, JF-12, etc.).

The Coast Guard will select proposals at its sole discretion on the basis of:

(1) How well they communicate an understanding of, and ability to meet, the proposed CRADA's goal; and

(2) How well they address the following criteria:

(a) Technical capability to support the non-Federal party contributions described; and

(b) Resources available for supporting the non-Federal party contributions described.

Currently, the Coast Guard is considering the University of Massachusetts Amherst for participation in this CRADA, because the University of Massachusetts Amherst has demonstrated the ability to operate SUAS in a maritime environment. However, we do not wish to exclude other viable participants from this or future similar CRADAs.

This is a technology demonstration effort. The goal of this CRADA is to identify and investigate the potential of the SUAS and their airborne sensors to determine their potential use in a maritime environment by the first responder and the DHS operational components. Special consideration will be given to small business firms/consortia, and preference will be given to business units located in the U.S.

This notice is issued under the authority of 5 U.S.C. 552(a) and 15 U.S.C. 3710(a).

Dated: June 2, 2016.

Dennis C. Evans,

CAPT, USCG,

Commanding Officer,

U.S. Coast Guard Research and Development Center.

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